Message

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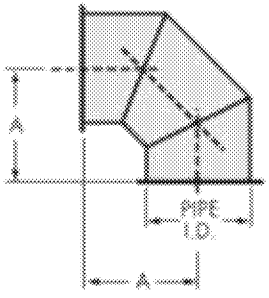
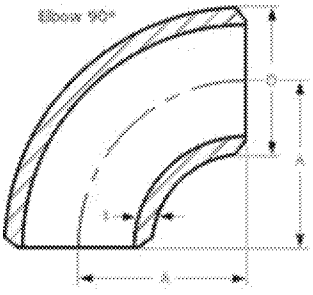
Sent: 2/2/2021 12:46:37 AM
To: Johnson, Steffan [johnson.steffan@epa.gov]
CC: lrector@nescaum.org
Subject: how does ASTM [and EPA] define "elbow"?

Flag: Follow up

Hi Stef --I've assumed that ASTM 2515 requires an elbow in the traditional sense - the method says "Steel 90° elbows should be used". To me an elbow for this purpose is what ClearStak uses:



but I don't know how ASTM defines "elbow" -- their 2515 drawing does not show an angled elbow like above, but a nice smooth bend which if taken literally is this:



Searching for ASTM [and] elbow, these are the first 2 hits I get:
https://www.octalpipefittings.com/steel-pipe-elbow/
https://www.zzfittings.com/product-details/astm-a234-wpb-elbow/

Given this fuzziness in the method, would a hard right angle piece qualify? Maybe even a T? Or taking the 2515 drawing literally, is a smooth turn required as in the 2nd pic above? We've assumed Mark's use of a T for this is not compliant, but ?? It does mix things nicely. If a T is allowed, that would solve our mixing problem -- it's a variation on the baffle theme of inducing extreme turbulence in the flow to get things mixed.

All this could affect our CFD modeling work - we don't want to model something that ends up being non-compliant in some way.
-- George